ABSTRACT

Buffer element for communication network, including a first buffer memory to store communication units corresponding to a first quality of service (QOS) level, and a second buffer memory to store communication units corresponding to a second quality of service level. A buffer manager selectively stores communication units from the first and second buffers based on the corresponding quality of service level, and retrieves communication units from the first and second buffer memories. The buffer manager includes a sorter unit for selectively storing based on the quality of service level. The buffer element may further include a depth adjuster to adjust the depth of the first and second buffer memory.